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Dan Matheson

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EXAMINER

CABRERA, ZOILA E

ART UNIT

PAPER NUMBER

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**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/680,604  
Filing Date: October 06, 2000  
Appellant(s): MATHESON, DAN

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Michael A. Papalas  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 24, 2006 appealing from the Office action mailed December 23, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,822,206	SEBASTIAN et al.	10-1998
6,295,513	THACKSTON	09-2001

2002/0012007 A1

TWIGG

01-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The rejection has been reproduced below for convenience.

**DETAILED ACTION**

***Final Rejection***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8-13 and 15-19 are pending in the application.

The rejection with respect to claims 1-6, 8-13 and 15-19 is maintained.

***Claim Rejections - 35 USC § 102***

2. Claims 1, 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sebastian et al. (US 5,822,206)**.

Claims 1, 8 and 15 are so broad as to read in **Sebastian et al.** who discloses a computer system for (Col. 17, lines 44-50) for capturing decision-related data to a product design (Col. 5, lines 44-47) comprising:

- a question software interface for capturing a question in a question object that encapsulates text-based information related to a design issue associated with said product design (Col. 16, lines 39-45, i.e., The material properties database

90 supports multiple data representations for any given property. The database 90 supports an **SQL interface to accomplish extensive pattern matching query operations, for example, return all resins with a glass transition temperature greater than 150 C**; Fig. 7, Material selector 72 and material property database 90); an answer software interface for capturing an answer in an answer object that encapsulates text-based information addressing information encapsulated in a selected question object and that is linked to said selected question object (Col. 5, lines 59-24; Col. 15, lines 34-36; the material selector module can provide its output, *or answer*, in the template notation of the present invention. Please note that any query that is made through the SQL interface returns an answer. In the example given above, the answer would be all resins with glass transition temperature greater than 150 C); and a decision software interface for capturing a decision in a decision object that encapsulates text-based information defining a product requirement in response to information in said selected question object and that is linked to said selected question object (Col. 6, lines 40-44; Col. 17, lines 4-35, i.e., the core design module 76 utilizes the information produced by the material selector module 72 to generate a more feasible design. Please note that the core design module takes into account the material selector module and give suggestions or decisions about the possible options that fulfill the user's requirements).

***Claim Rejections - 35 USC § 103***

3. Claims 2, 4-6, 9, 11-13, 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sebastian (US 5,822,206)** in view of **Thackston (US 6,295,513)**.

**Sebastian** discloses the limitations of claims 1, 8 and 15 above but fails to specifically disclose the limitations of claims 2, 4-6, 9, 11-13, 16 and 18-19. However, **Thackston** discloses such limitations as follows:

As for claims 2, 4-6, 9, 11-13, 16 and 18-19, Thackston discloses:

- each of said question object, said answer object, and said decision object is stored in a tool-neutral persistent form (Col. 5, lines 47-51);
- said question interface captures an association of said question object with a decision object (Fig. 19B, element 1926, 1936 or Fig. 23, elements 4320 and 4360);
- said answer interface captures an association of said answer object with a question object (Fig. 23, element 4320, 4360);
- said decision interface captures an association of said decision object with an answer object (Fig. 19B, output of element 1928 is associated with decision element 1936);
- said answer interface captures an association of said answer object with a question object (Fig. 23, element 4320, 4360, query and result).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **Sebastian** with

**Thackston** because it would provide an improved system that maintains engineering data, such as design documents and three dimensional model data, in a common, neutral format, which is accessible by authorized team members through a graphical user interface (**Thackston**, Col. 3, line 64 – Col. 4, lines 4)

4. Claims 3, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sebastian and Thackston** in view of **Twigg (US 2002/0012007 A1)**.

**Sebastian and Thackston** discloses the limitations of claims 1-2, 8-9 and 15-16 and further **Thackston** discloses the use of separate relational database (Col. 6, lines 50-53). **Sebastian and Thackston** fail to specifically disclose, regarding claims 3, 10 and 17, wherein associations between each of said question object, said answer object, and said decision object are captured using foreign keys. However, **Twigg** discloses an internet based design/drafting system wherein associations between description data, note data and cost data regarding a design take place (Page 3, 0038, lines 13-24 and lines 32-35, "one or more data fields 36, 46 of each design file 22 can be related to the overall design; Fig. 3, foreign keys correspond to Class #, Description, Note, Cost). Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **Sebastian and Thackston** with **Twigg** because it would provide an improved system wherein relationships of a class object are related using foreign keys or a common column such as shown in Fig. 3, Class #, 32-1, 32-2, 32-X; Description 34-1, 34-2, 34-x), in order to communicate ideas regarding a design and/ or features of a design (**Twigg**, Page 1, 0005, lines 1-3).

### **(10) Response to Argument**

Regarding independent claims 1, 8 and 15, Appellants set forth two arguments on Pages 6-8 of the brief: 1) Sebastian does not teach an answer object that is linked to a selected question object; and 2) Sebastian does not teach a decision object that is linked to a selected question object. These arguments will be addressed below in order.

1) The appellant argues on Page 6 of the brief that Sebastian does not teach an answer object that is linked to a selected question object. Sebastian teaches an answer object that is linked to a selected question object (Col. 5, line 59 – Col. 6, line 24, i.e., “the material selector module uses the knowledge contained in the nature of the end-use application (what kind of part is it), in conjunction with its operating environment (where will the part perform) to define the short list of material properties and associated threshold values that are critical for success.”). Please note that the answer corresponds to the list of materials in response to a knowledge-contained question such as “what kind or part is it” or “where will the part perform”. Furthermore, Sebastian teaches that *queries* are formulated to any of a number of remote data servers to generate a ranked list of suitable materials (Col. 6, lines 25-27). Sebastian teaches that the material properties database 90 supports an SQL interface, or query interface, to accomplish query operations such as return all resins with a glass transition temperature greater than 150 C (Col. 16, lines 39-45). Queries correspond to questions and the answer would correspond to the generated list of materials. No



difference is seen between Sebastian's device and appellant's. It is not clear from appellant's arguments whether the use of a question mark is seen as the difference between the inventions. However, the use of a punctuation mark is not considered to be a distinction with a difference since the database must be "queried" in both instances and an "answer" returned. The output of the material selection module corresponds to the answer or the generated list of materials (Col. 15, lines 35-37).

2) Appellant argues on Page 6 of the brief that Sebastian does not teach a decision object that is linked to a selected question object. Sebastian teaches a decision object that is linked to a selected question object (Col. 6, lines 40-44, i.e., "By taking the economics of product design and production into account at an early stage, *decisions* and constraints can be determined before detail designs are made."). Sebastian discloses "For example, when *deciding* upon an electronics enclosure for automotive under-hood *environments*, the material selector module automatically specifies thermal and chemical resistance constraints, electrical properties, impact considerations typical of use and abuse, cost, even basic size parameters.". There is a decision made by the material selector module based on the questions "what kind of part is it" or its *operating environment* "where will the part perform" and thereby generate a ranked list of materials (Col. 5, line 59 to Col. 6, line 27).

Regarding claim 2, 9 and 16, Appellant argues on Page 9 of the brief that Thackston describes data neutrality supporting the upload and conversion of design

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modes from various formats into a single standard format, and further argues that data neutrality does not constitute storing objects in a tool-neutral persistent form (Examiner wants to clarify that in the Final Action the citation is Col. 5, lines 47-51 and not Col. 4, lines 47-51 as cited in the Brief). Appellants argue that in Thackston there is no mention of storing anything. Examiner disagrees because as defined in the Specification, Page 3, lines 3-4, a tool neutral persistent form allows access to the data by any tool via a publicly defined interface. Thackston discloses a database or storage, so-called Global Manufacturer's Registry (GMR), that provides data neutrality for users by supporting the upload and conversion of part design models from various formats types into a standard neutral format wherein a designer is not precluded from using the GMR based on the fact that it uses a particular part design model format (Col. 5, lines 30-54). Therefore, a designer can access the Global Manufacturer's Registry from any design tool. With respect to question object, answer object or a decision object, Sebastian teaches all these limitations as discussed above and therefore the combination of Sebastian and Thackston is appropriate since both are analogous arts directed to engineering design systems and methods.

As for claims 4, 11 and 18, Appellant argues on Pages 9-10 of the brief that Thackston does not disclose "said question software interface captures an association of said question object with a decision object." Examiner disagrees because Thackston discloses a question software interface captures an association of said question object with a decision object (Figs. 19A, i.e., INTERACTIVE SESSION USING PART DESIGN

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MODEL?, If YES then continue with steps 1912-1914 and 1922-1928 up to a DECISION MADE REGARDING DESIGN ISSUES, step 1936 of Fig. 19B). Please note that the decision is associated with the part design model.

Regarding claims 3, 10 and 17, Appellant argues on Pages 10-11 of the brief that "the Examiner has failed to show where Twigg teaches the objects are stored in a separate relational database". Examiner wants to reiterate that, as clearly pointed out in the Final Rejection, Thackston discloses the use of separate relational databases (Col. 6, lines 50-53, i.e., the data stored by the system could be stored at a single location or amongst multiple locations in a so-called hybrid relational object oriented database architecture). Lastly, Appellant further argues that "Class #, Description, Note, Cost are not foreign keys" and that such items are fields inherent within a design file. As described in the Specification, Page 9, lines 10-13, "lines connecting the various tables represents a foreign key (i.e., a common column in each connected relational database) used to represent relationships between data stored in the tables". Twigg discloses an internet based design/drafting system wherein associations between description data, note data and cost data regarding a design take place (Page 3, 0038, lines 13-24 and lines 32-35, "one or more data fields 36, 46 of each design file 22 can be related to the overall design"; Fig. 3, please note that Class #, Description, Note, Cost includes lines connecting the various tables used to represent relationships between data stored in the tables and therefore constitute foreign keys).

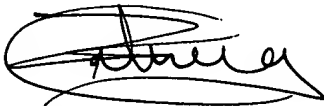
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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Zoila Cabrera  
Primary Examiner  
Art Unit 2125  
May 9, 2006

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